

Analysis of rice massive importing impact towards poverty alleviation in indonesia based on micro, macro, politics and international economics

Nur Amalya Yusrin¹, Arissetyanto Nugroho², Darmansyah³

¹Sekolah Pascasarjana Ilmu Ekonomi, Universitas Pancasila/Universitas Pradita

^{2,3}Sekolah Pascasarjana Ilmu Ekonomi, Universitas Pancasila

Corresponding author: nur.amalya@pradita.ac.id, arissetyanto.nugroho@univpancasila.ac.id,
darmansyah@univpancasila.ac.id

Abstract

Rice is a highly significant staple food commodity globally. This statement is notably true on the Asian continent, where rice acts as the primary food for the majority of the population, particularly among the lower middle class. Asian farmers contribute for over 90% of global rice production. Indonesia is one the biggest rice producer in the world were contributing 53,63 million tonnes in 2023. However, the Indonesia government still need to import massively around 3 million tonnes of rice at the end of 2023 and still continuing in 2024. Comparing to the historical data, Indonesia has been rice self-sufficiency country in 1980s and nowadays is not reached due to some advanced economic issue. Previous research shows distinct results of rice importing impact, some stating that importing beneficial however some explained it is increasing number of pverty in Indonesia. This study will analyse the benefits and the disadvantages impact of rice importing massively in Indonesia towards Poverty Alleviation through literature study from macroeconomics, microeconomics, international economics and politics economics. The output is recommendation for managerial stakeholders to create the welfare for each stakeholder and the idea of creating the rice self-sufficiency vision.

Keywords: Microeconomics; Macroeconomics; International economics; Politic economics; Export; Import; Rice self-sufficiency

INTRODUCTION

Given that rice cultivation is labour-intensive and necessitates a considerable amount of water, regions characterised by moderate temperatures, affordable labour, and abundant precipitation are well-suited for this staple food. Additional favourable variables consist of substantial amounts of precipitation. Asia is native to a large number of the countries and regions that meet these criteria. A substantial number of Asian cultivators can be traced backwards to their birthplaces and current places of residence, which are both underdeveloped regions of the continent. However, in Indonesia, the prices of rice sold in retail market is rising (in retail, national average: 5.6 percent month-on-month; 18.4 percent year-on-year) because to the anticipated decrease in harvest caused by El Niño (world bank, 2023). The El Nino weather phenomena led in a drop in productivity. The peak of El Nino is forecasted by the Meteorology, Climatology, and Geophysics Agency (BMKG) to reach during August-September 2023 (J, 2023). El Nino, a meteorological phenomenon characterised by less precipitation, can lead to drought, which can have detrimental effects on seasonal food crops that rely on adequate water supply. Consequently, agricultural productivity may decrease.

The prohibition of non-basmati rice exports by India and the suspension of Russia's Black Sea Grain Initiative have had a detrimental impact on the global food supply. These two causes worsen the "clouds" around food supplies, a situation that El Nino is anticipated to improve. Because of this reason, The Indonesian government plans to import 1.5 million tonnes of rice, largely from Thailand and Vietnam (Noor, 2023). This decision aims to strengthen domestic rice reserves and regulate prices. It is in addition

to the 2 million tonnes of rice imports already allocated to the State Logistics Agency earlier this year, as well as the 300,000-tonne surplus from last year's import plan. Unfortunately, Rizky (2023) explained Indonesia will once again engage in substantial rice imports in 2024. Following the issuance and implementation of 2 million tonnes of rice import permits in early 2023, Indonesia is now making arrangements to import an additional 3 million tonnes of rice by 2024 (Rizky, 2023). Budi Waseso, the Chief Director of Perum BULOG, stated that there will be an additional 1.5 million tonnes of rice imports on 2023 (Rizky, 2023). However, out of that total, BULOG will only import 1 million tonnes. It is because to the fact that Perum BULOG has the capacity to only import and contract 1 million tonnes of rice. He stated that out of the predicted additional 1.5 million tonnes by the end of 2023, 1 million tonnes have been acquired through contracts, with only 600 thousand tonnes expected to be fulfilled within this year (by the end of 2023) (Rizky, 2023). The other 400 thousand tonnes would be delivered thereafter. The inability of the 500 thousand tonnes of rice to enter or the loss of the quota was attributed to Indonesia's insufficient loading and unloading capability. Additionally, the government was also taking into account the price and quality of the rice (Rizky, 2023). Budi Waseso also emphasised that the government's decision to import an extra 2 million tonnes of rice in 2024 was a direct result of the extension of the food aid programme, specifically in the form of rice, until June 2024. In addition, the government has assigned an import of 2 million tonnes of rice in 2024 due to the postponement in the planting and harvest seasons (Rizky, 2023; Rachmawati, 2023).

The issue of Indonesia's failure to achieve rice self-sufficiency, while being an agrarian country, is definitely a complex and diverse dilemma. Multiple reasons contribute to this problem, and tackling it necessitates a comprehensive approach that encompasses agricultural practises, infrastructural development, farmer support, and consistent government policies (Rizky, 2023). Insufficient investment in agricultural technology, outdated farming practices, and inadequate infrastructure contribute to lower rice yields (Rizky, 2023). The fragmented nature of the agricultural sector, with a substantial portion being smallholder farmers, makes it challenging to implement modern and efficient farming methods on a large scale (Rizky, 2023). Additionally, unpredictable weather patterns and climate change impact crop yields, creating a further hurdle for consistent and sustainable rice production (Rizky, 2023). To overcome these barriers, Indonesia needs a comprehensive strategy that includes increased investment in agricultural technology, widespread adoption of modern farming practices, and targeted infrastructure development to support the agricultural sector.

Moreover, policy inconsistencies and a lack of stable, long-term strategies exacerbate the challenge. Frequent changes in government policies related to agriculture, trade, and subsidies can create uncertainties for farmers and hinder sustained efforts towards self-sufficiency (Rizky, 2023). To address this, Indonesia requires coherent and stable policies that prioritize the needs of farmers, encourage sustainable practices, and provide a conducive environment for long-term planning and investment in the agricultural sector (Rizky, 2023). Overall, achieving rice self-sufficiency necessitates a concerted effort to address these structural and policy-related challenges that have hindered progress in the agricultural landscape (Rizky, 2023).

Based on the discussion above, we can conclude the act of extensively importing rice to Indonesia entails both advantages and disadvantages. Importing rice has the advantage of mitigating immediate shortages in local supplies, so assuring that the nation can satisfy the need for this vital staple. It acts as a safeguard against any crop failures, natural catastrophes, or any other events that could impede local output. The act of importing rice can additionally aid to maintaining price stability, thereby averting sudden surges in rice costs and guaranteeing reasonable accessibility for consumers. Moreover, this enables Indonesia to broaden its suppliers, thus ensuring more advantageous pricing and conditions in the international rice market.

Nevertheless, there are notable drawbacks associated with extensive rice imports. Indonesia's massive demand on imports presents a threat to the nation's food security, since it exposes the country to the uncertainties of global market swings, trade disruptions, and geopolitical tensions that might potentially disrupt the supply chain (Noor, 2023). This interdependence can also have an adverse effect on the sustenance of local farmers, resulting in reduced earnings and possible joblessness in the agriculture industry. Furthermore, the importing of commodities on a big scale might potentially lead to

trade imbalances and put pressure on foreign currency reserves, which can have a negative impact on the general economic stability of the country (Noor, 2023).

Further research on the enduring effects of extensive rice imports on Indonesia's agricultural sector, economy, and food security would be highly beneficial for future studies. It is clear, that in previous research, there is a distinct result about the impact of massive rice importing in Indonesia. The result of importing impact to the boost of technology and revenue of rice sellers. However, some research stated there is a missing opportunity for local farmers in Indonesia to increase their welfare and solving the poverty alleviation in rural. Further inquiry is necessary in order to explore options for achieving a balance between the need for imports and the goal of strengthening domestic production. This investigation should also examine the socio-economic effects on local farmers and evaluate the effectiveness of government policies in regulating these imports towards poverty alleviation. In addition, gaining insight into the geopolitical and global trade dynamics that impact rice imports and their consequences for Indonesia's overall economic situation will enhance a thorough analysis. In general, the problems discussed are:

1. Is macroeconomic aspect, is the 3 million tonnes rice importing could affect to Indonesia poverty alleviation?
2. In microeconomic aspect, is the 3 million tonnes rice importing could affect to market consumption in Indonesia poverty alleviation?
3. In international economics aspect, is the 3 million tonnes rice importing affecting to Indonesia poverty alleviation?
4. In politic economic aspect, is the 3 million tonnes rice importing affecting to Indonesia poverty alleviation?

LITERATURE REVIEW AND HYPHOTESIS DEVELOPMENT

Literature Review

Macro economics

Analysis of Macro Economics

Macroeconomics investigates an economy's overall behaviour and performance (Tsai, 2019). The focus is on analysing and understanding economic figures including GDP, unemployment, inflation, and national income. Macroeconomics studies sectoral interactions and dynamics to understand economic development, employment, price stability, and government policy consequences. It allows politicians and economists to plan and influence a country's or region's economic performance (Tsai, 2019).

The examination of the macroeconomic impact of importing 3 million tonnes of rice to Indonesia commences with an assessment of the nation's trade balance (Rizky, 2023). An import of such magnitude might create trade imbalances, possibly resulting in a trade deficit if the value of rice imports exceeds the value of exports. The deficit has a direct impact on Indonesia's foreign exchange reserves, since the substantial outflow of foreign currency required to purchase the rice may put pressure on the country's capacity to fulfil its international financial commitments. Ensuring economic stability necessitates effective management of the trade balance and foreign exchange reserves.

The impact of inflation on the domestic agricultural industry is significant in terms of macroeconomics. The relative competitiveness of imported rice in comparison to domestically produced varieties can have an impact on the dynamics of inflation. Lower-priced imported rice has the potential to stabilise or decrease overall rice prices, hence affecting the inflation rate. Nevertheless, there are difficulties that arise within the domestic agricultural industry. The potential threat of imported rice, due to its large cost advantage, may jeopardise the income and livelihoods of local farmers, so impacting the general stability of the agricultural workforce and income distribution.

The examination explores the domain of public finances. Ensuring the affordability of rice for consumers, particularly when subsidies are necessary to maintain competitive prices, can put a burden on government finances. Assigning financial resources for subsidies or support programmes is a crucial component of macroeconomic policy. The repercussions on government finances have wider ramifications for public expenditure, fiscal strategies, and the general economic well-being of the nation.

Comprehending the worldwide framework is imperative. Indonesia's rice imports are a component of the broader international rice market. Volatility in global rice prices, shifts in worldwide supply and demand, and geopolitical considerations can have a substantial impact on the macroeconomic circumstances related to rice imports. To effectively navigate these global trends, it is crucial to strategically analyse and adjust to ensure that Indonesia maintains a favourable position in the broader international rice trade.

The macroeconomic analysis highlights the primary objectives of ensuring access to sufficient and stable food supplies. Although the importation of rice might provide immediate benefits for food security, it is crucial that the macroeconomic approach is in line with wider national goals. It is crucial to guarantee a reliable and enduring supply chain, while also taking into account the social and economic consequences for local farmers. An all-encompassing strategy that combines macroeconomic policies with national development objectives is essential for effectively addressing the complex difficulties linked to the importation of 3 million tonnes of rice into Indonesia.

Indonesia is not only an Asia contingent country who imports rice massively, another Asia country, Philippines, also imports massive number of rice. When considering the Philippines' substantial rice imports, it highlights the shared difficulties that both countries encounter in managing both food security and financial stability (Muhamad, 2023). Both Indonesia and the Philippines are facing the challenge of securing a sufficient food supply for their large populations, and their dependence on imported rice presents comparable macroeconomic vulnerabilities (Muhamad, 2023). The act of importing a significant amount of rice can exert pressure on the trade balance and foreign exchange reserves, hence contributing to economic vulnerabilities such as trade deficits and currency value volatility. Indonesia, with its larger and more diverse economy, may be better equipped to handle the macroeconomic consequences of significant rice imports compared to the Philippines (Muhamad, 2023). Nevertheless, both nations can glean valuable insights from one another's experiences. An example of this is the Philippines' struggle with trade imbalances and currency devaluation due to significant rice imports. This emphasises the significance of meticulous financial management for Indonesia (Muhamad, 2023). Gaining insights from both the achievements and failures of the Philippines can guide Indonesia in its strategy for implementing policies. (Muhamad, 2023) This will help ensure that appropriate measures are established to safeguard the welfare of domestic farmers, effectively handle inflationary pressures, and reduce dependence on a single source of rice supply to minimise geopolitical risks (Muhamad, 2023).

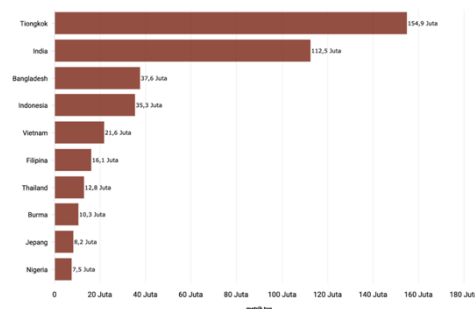


Figure 1. 10 Highest Volume Country Rice Consumption in 2022-2023

Source: (Muhamad, 2023)

Journal Analysis of Macro Economics Aspects

Pudjiastuti et al. (2023) analysed the rice consumption in Indonesia. The consumption of rice in Indonesia has been on the rise as a result of population expansion, while the domestic output has been experiencing a decline (Pudjiastuti, Aris, & Krisnandika, 2023). Consequently, Indonesia has resorted to importing rice in order to fulfil its local requirements. Although short-term imports can satisfy current consumption requirements, prolonged dependence on imports can disturb the equilibrium of the rice trade (Pudjiastuti, Aris, & Krisnandika, 2023). The government has enacted a range of rules to regulate rice pricing and ensure market stability. Nevertheless, additional actions are required to encourage the expansion of food variety, enhance agricultural infrastructure, and bolster local food production. Emphasising the importance of prioritising research and innovation in rice farming technology is crucial for enhancing

productivity and mitigating the decrease in production area (Pudjiastuti, Aris, & Krisnandika, 2023). In addition, import duties might be implemented as trade measures to safeguard the native rice sector and decrease dependence on imports. In order to attain rice self-sufficiency and guarantee food security in Indonesia, it is necessary to use a comprehensive approach (Pudjiastuti, Aris, & Krisnandika, 2023).

Through this journal, it is clear the reason why Indonesia keeps importing the rice. Indonesia remains importing rice despite its domestic production due to insufficient capacity to meet the country's demands. During 2010 to 2019, the annually increase rate of rice productivity has been 2.0%, however the area utilised for cultivation and the amount of rice produced have been decreasing by 1.8% and 1.6% respectively each year. The decrease in the producing area has led to a scenario where domestic production surpasses domestic consumption. Nevertheless, the current level of output remains insufficient to satisfy the rising demand for rice as a result of population expansion. Consequently, Indonesia depends on rice imports to fill the difference between its local production and consumption. Imports might provide a temporary solution for meeting current consumption demands. However, over time, depending heavily on imports can negatively impact the trade balance of rice and give rise to economic challenges (Pudjiastuti, Aris, & Krisnandika, 2023).

The continuous import of rice can considerably affect a country's trade balance. In the case of Indonesia, the increasing imports of rice can result in a trade imbalance. If a country's rice imports surpass its rice exports, it results in a deficit in the rice trade balance. As a result, the nation's spending on rice imports exceeds its revenue from rice exports. The deficit could lead to economic implications by putting pressure on the nation's foreign exchange reserves and fostering a dependence on external sources for rice procurement. Moreover, an uneven distribution of trade in rice might have an impact on the overall trade a state of equilibrium which represents the disparity between a nation's exports and imports of all commodities and services. Achieving equilibrium in a nation's rice commerce is crucial to guarantee a steadfast and enduring economy (Pudjiastuti, Aris, & Krisnandika, 2023).

Several policies have been implemented to control rice pricing in Indonesia. The first phase of policies, implemented from 1967 to 1996, involved government intervention to control rice prices and maintain price stability. This was done through market intervention and the establishment of the BULOG, a government-owned institution responsible for food distribution and price control. The government also regulated rice imports and tariffs to bridge the gap between domestic production and consumption (Pudjiastuti, Aris, & Krisnandika, 2023).

In 1995, Indonesia joined the World Trade Organization (WTO) and implemented the Agreement on Agriculture (AoA). As per the AoA, Indonesia was required to open its market to products from other WTO member countries and reduce agricultural input subsidies. The rice pricing was set at 160% of the import cost, and a minimum annual quota of 70,000 tons of rice imports was established (Pudjiastuti, Aris, & Krisnandika, 2023).

The second phase, from 1997 to 2000, saw the liberalization of the rice market due to pressure from the International Monetary Fund (IMF) and the World Bank. Agricultural subsidies, including rice pricing policies, were removed, and the BULOG lost its import monopoly. Import tariffs were reduced to 0%, leading to a significant increase in rice imports (Pudjiastuti, Aris, & Krisnandika, 2023).

Since 2001, the Indonesian government has gradually reintroduced rice market controls with modifications. The aim is to address the negative impact of market liberalization on rice producers and consumers. The government has focused on stabilizing rice prices through the privatization of the BULOG and implementing a rice import tariff for farmer protection (Pudjiastuti, Aris, & Krisnandika, 2023). Overall, the policies implemented include market intervention, import regulations, tariff controls, and government purchasing prices to incentivize farmers. These policies aim to maintain price stability, protect farmers, and ensure food security in Indonesia (Pudjiastuti, Aris, & Krisnandika, 2023).

Silaban et al (2023) analysed the influence of rice commodity prices and inflation on the import value of North Sumatra Province. It uses a quantitative approach and data analysis techniques such as descriptive analysis and path analysis. The results show that an increase in rice commodity prices will increase the value of imports, while an increase in inflation will reduce the value of imports (Silaban, Indriani, & Pasaribu, 2023). The study findings indicate that a rise in rice commodity prices will result in a corresponding increase in import values. Conversely, a rise in inflation does not exert a substantial

impact on the import value variable. Nevertheless, when both variables are concurrently taken into account, the research discovered that the collective impact of rice commodity prices and inflation accounts for 31.9% of the import value variable (Silaban, Indriani, & Pasaribu, 2023). What makes this finding is interesting is, an upward trend in rice commodity prices has a favourable and substantial effect on the import value. Consequently, a rise in the price of rice commodities results in a corresponding increase in the value of imports (Silaban, Indriani, & Pasaribu, 2023). The increase in rice commodity prices has a favourable and substantial effect on the import value due to rice being a fundamental food item in Indonesia. When the price of rice increases, it indicates a rising demand or a shortage of rice in the local market. In order to satisfy the demand, the country must expand its rice imports, thereby resulting in a rise in the import value. The study's findings show a positive correlation between rice commodity prices and import value. The regression coefficient indicates that higher rice prices result in increased import value (Silaban, Indriani, & Pasaribu, 2023). The contradiction also found in this study; it stated that the impact of inflation on the import value is not significant. The regression coefficient for inflation is negative, indicating that an increase in inflation does not have a significant effect on the import value variable (Silaban, Indriani, & Pasaribu, 2023). It is predicted because the research was conducted specifically in north sumatera.

Micro economics

Analysis of Micro Economics

Microeconomics is a branch of economics that focuses on the study of individual economic agents and their interactions in specific markets. It examines how individuals, households, firms, and small economic units make decisions regarding resource allocation, production, consumption, and pricing within a particular economic setting. Microeconomics is concerned with the "small-scale" aspects of the economy and seeks to understand the behaviours and choices of economic actors within these smaller units (Jehle & Reny, 2011).

The microeconomic analysis of importing 3 million tonnes of rice to Indonesia commences by examining the behaviour and preferences of consumers. The major factors are upon the affordability and price dynamics of rice in the domestic market. If the imported rice is priced more competitively than locally produced kinds, buyers may enjoy advantages in the form of reduced pricing, which could enhance their ability to make purchases. Nevertheless, it is crucial to thoroughly examine the influence on consumer decisions and the broader market dynamics, taking into account variables such as consumer inclinations, income brackets, and the responsiveness of rice demand.

The microeconomic analysis encompasses the impact on local rice producers as well as the wider agriculture industry. The rise in competition from imported rice could provide difficulties for local farmers, potentially resulting in a decrease in their revenue and profitability. The investigation explores the possible replacement of rice varieties produced locally, investigating the consequences for farmers' lives and the long-term viability of the domestic agriculture sector. To comprehend the microeconomic influence on the agricultural landscape, it is crucial to take into account the efficiency, competitiveness, and adaptation of local producers.

The introduction of imported rice can impact the levels of employment and the distribution of income within the agriculture sector. If local farmers encounter difficulties as a result of heightened competition, there could be repercussions for employment prospects and the overall economic welfare of rural communities reliant on agriculture. Microeconomic analysis assesses the possible changes in how revenue is distributed and how employment is structured, taking into account the subtle effects on various groups of people involved in the rice production and distribution process.

It also impacts on industries that come after in the production process and the wider network of suppliers. The transportation, storage, and retail industries could undergo variations in economic activity due to fluctuations in the demand and distribution of rice. The analysis examines the possible economic prospects or difficulties for firms involved in the rice supply chain, highlighting the interdependence of many economic actors and industries impacted by the importation of a substantial amount of rice.

Journal Analysis of Micro Economics Aspects

Wahyudi et al. (2019) explained the factors influencing the frequency of consumers' purchases of locally-produced rice in Jakarta Province, Indonesia. The results showed that gender, age, occupation, income, label, and price significantly influenced the frequency of purchases. Specifically, males purchased locally-produced rice more frequently than females. Younger consumers tended to purchase less frequently, while education level and the color of the rice had a negative impact on frequency. On the other hand, promotion and income had a positive impact. The findings suggest that improving the quality of locally-produced rice, offering affordable prices, and implementing effective marketing strategies can increase consumer purchases of locally-produced rice (Wahyudi, Kuwornu, Gunawan, Datta, & Nguyen, 2019). When thinking about the one who responsible for shopping household needs, woman comes first on mind, However, this study shows different result. Gender has a significant impact on the frequency of purchases of domestically-produced rice. The survey revealed a higher frequency of local rice purchases among males compared to females. This can be ascribed to the cultural norm in Indonesian households where women traditionally assume the role of buying and food preparation, which includes the task of cooking rice. Nevertheless, it is noteworthy that while women are more engaged in shopping, they have a lower inclination towards locally-sourced rice in comparison to males (Wahyudi, Kuwornu, Gunawan, Datta, & Nguyen, 2019).

Income plays a substantial influence on customers' buying behaviour (Wahyudi, Kuwornu, Gunawan, Datta, & Nguyen, 2019). The journal revealed a strong and important correlation between customers' yearly income and the frequency at which they purchase locally-produced rice. Increased income levels have a clear correlation with improved purchasing power, consequently empowering consumers to acquire goods and services. Regarding domestically-produced rice, the extent of purchases is contingent upon money, given that rice serves as a fundamental dietary staple and a primary necessity for the majority of Indonesians (Wahyudi, Kuwornu, Gunawan, Datta, & Nguyen, 2019). The affordability of domestically-grown rice was found to be a significant determinant in its purchase, with consumers of higher income levels exhibiting a greater propensity to purchase domestically-grown rice on a regular basis. Hence, income plays a crucial role in influencing customers' capacity and inclination to buy domestically-produced rice (Wahyudi, Kuwornu, Gunawan, Datta, & Nguyen, 2019).

To improve the frequency of purchases of locally-produced rice, marketing tactics can be employed, targeting many crucial elements (Wahyudi, Kuwornu, Gunawan, Datta, & Nguyen, 2019). First and foremost, enhancing the calibre of rice produced locally is of utmost importance. Training and providing capacity-building support to farmers can help improve their production practises and ensure the cultivation of high-quality rice. Furthermore, providing a comparatively more affordable product in contrast to imported rice has the potential to entice consumers and foster a greater inclination towards choosing domestically-produced rice on a more regular basis. This can be accomplished by implementing input subsidies for farmers, which would effectively lower the price of domestically-grown rice on the market. Furthermore, it is crucial to have efficient product promotion. Utilising promotional tactics such as discounts, online initiatives, and targeted marketing might enhance customers' inclination to buy domestically-sourced rice. It is crucial to promote knowledge about rice produced locally through diverse platforms such as television, internet, social media, newspapers, and magazines. Through the implementation of these marketing tactics, the frequency of consumers' purchases of locally-produced rice can be enhanced, resulting in mutual benefits for both farmers and consumers (Wahyudi, Kuwornu, Gunawan, Datta, & Nguyen, 2019).

In the farmer aspect, this study explains different results. Octastefani and Kusuma (2015) stated there is no significant impact to the farmer because of the importing policy from Indonesia government. The impact of rice imports on farmers is detrimental. The increase in rice imports has had a negative effect on the well-being of farmers and the agricultural industry. The result indicates a considerable rise in rice imports, accompanied by a decline in rice exports. These findings indicate that farmers are encountering difficulties in satisfying the domestic rice requirement and are being impacted by the

dependence on imported rice. In addition, government policies like as the privatisation, liberalisation, and deregulation of agriculture have heightened the reliance on imported rice, thus jeopardising the livelihoods of farmers (Octastefani & Kusuma, 2015).

International Economics

International economics focuses on economic relationships and interdependencies between nations. It covers international trade such as export and import, finance, and the movement of goods, services, capital, and resources. International economics studies trade imbalances, currency rates, and how foreign policies affect nations' economies.

Analysis of the international rice economics

The highest quantity of paddy produced in Indonesia in 2023 happened in March, with 9.15 million metric tonnes. Indonesia is a major global rice producer, which achieved a rice paddy production of over 54 million metric tonnes in 2022 (Statista, 2023). Given that rice provides as the primary sustenance in the diets of numerous Indonesians, the production of rice in Indonesia plays a vital role in ensuring the nation's food security. The global rice trading market is quite limited, which is a fascinating fact considering its status as a commonly traded commodity. Based to research studies conducted by the World Bank, just 5% of the global rice come is traded on foreign markets. This shows the considerable level of price volatility in response to changes in the supply and demand for the specific product or service being provided (indonesia investments, 2017).

Furthermore, the entirety of rice traded in the world market is exclusively produced by three countries, including Thailand, India, and Vietnam (indonesia investments, 2017). These countries have the sole ability to export rice. The rapid changes in trade policy implemented by these three exporting countries probability to demonstrate the capacity to stimulate rice-importing nations to participate in stockpiling and speculating, thereby resulting in a substantial surge in the price of rice and presenting a notable peril to developing nations in Asia (where rice serves as the primary sustenance for the underprivileged).

In 2008, a situation unfolded where the price of rice experienced a significant surge, resulting in a rise in the poverty rate across Asia. Multiple Asian countries have signed the ASEAN Plus Three Emergency Rice Reserve (APTERR) pact in order to address the current crisis. The agreement states that a total quantity of 0.78 million tonnes of rice will be stored by the participating countries, which include ASEAN countries as well as the China, Japan, and Korea. The stockpiled rice will be used in reaction to the fluctuation of the global rice price or in times of natural calamities or other requirements for humanitarian aid. The participation of China, Japan, and South Korea has made the most significant contributions to the deal.

Eventhough Indonesia is the third largest rice producer in the world, Indonesia nevertheless needs to import rice almost every year to maintain the rice reserve needs. This situation occurs due to farmers employing inefficient agricultural techniques, along with high per capita rice consumption (due to a large population). Indonesia has one of the highest per capita rice consumption rates in the world. The per capita rice consumption in Indonesia was recorded at almost 150 kilogrammes (rice, per person, per year) in 2017. Only Three countries that has higher per capita rice consumption than Indonesia, they are Myanmar, Vietnam, and Bangladesh.

Rice farming in Indonesia is predominantly carried out by small-scale farmers, rather than large private or state-owned companies. Small-scale farmers contribute around 90% of the entire rice production in Indonesia. Each farmer has an average land area of less than 0.8 hectares. In 2023, the forecast rice production in Indonesia for the period during January to September 2023 is estimated to be 45.33 million tonnes of GKG, which represents a decrease of 0.23 percent compared to the 45.43 million tonnes produced in 2022 (BPS & BRIN, 2023). The September 2023 KSA Survey predicts that there will be a total of 8.30 million tonnes of Gross Kernelled Grain (GKG) of rice produced over the period of October to December 2023, taking into account the different phases of rice development. In 2023, the estimated rice production is to be 53.63 million tonnes of GKG, which is a reduction of 1.12 million tonnes (2.05 percent) comparing to the production 2022 which reached 54.75 million tonnes. The previously peak of rice output is projected to occur in March of both 2022 and 2023, followed by a

decline in December 2023. The peak on march 2023, the rice production was reached a total of 8.92 million tonnes of GKG. Based on the reduction prediction, it is expected rice production in December 2023 reaches 1.93 million tonnes of GKG (BPS & BRIN, 2023).

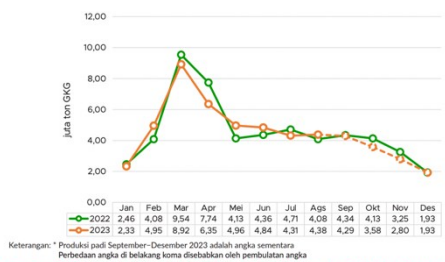


Figure 2. Rice Production by Months in Indonesia (thousand tonnes GKG), 2023
 Source: (Badan Pusat Statistik, 2023)

In 2023, Java Province, including East Java, West Java, and Central Java, will be the leading production of rice. The provinces of Riau Islands, DKI Jakarta, and West Papua have the lowest rice production. There will be a substantial decline in rice production in central South Sulawesi, West Java, and Central Java by 2023. On the contrary, there has been a rise in rice production in West Nusa Tenggara, West Sumatra, and Central Sulawesi.

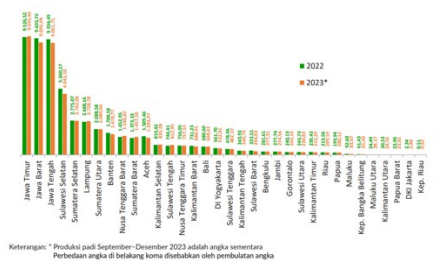


Figure 3. Rice Production by Province in Indonesia (thousand tonnes GKG), 2023
 Source: (Badan Pusat Statistik, 2023)

Considering that Indonesian consumes a large quantity of rice, and recognising the risks of being a rice importer when food prices rise (which burdens poor households as they spend over half of their total expenditure on food), Indonesia places a high priority on achieving rice self-sufficiency.

Additionally, Indonesia has the ambition to become a rice exporter where is not executed yet due to several reason explained in this paper. Indonesia has struggled for several decades to achieve self-sufficiency in rice production, but only succeeded in the mid-1980s and in 2008-2009. In recent years, Indonesia has needs to import approximately 3 million tonnes of rice annually, primarily from Thailand and Vietnam, in order to secure the country's rice reserves.

This import is carried out by BULOG (the National Logistics Agency of Indonesia). BULOG monopolies on the import and export of rice, regulates the distribution process, and maintains price stability of rice in Indonesia. BULOG typically maintains a rice reserve of between 1.5 tonnes and 2 tonnes by purchasing rice from domestic producers and foreign importers. BULOG (the National Logistics Agency of Indonesia) plays a crucial role in managing rice exports and imports in Indonesia, contributing significantly to the country's food security and economic stability. BULOG overseeing the import and export of rice to guarantee food security and maintain stable prices within the country. BULOG has the power to strategically import rice when domestic production is inadequate to fulfil demand, thereby preventing shortages and stabilising prices. The agency participates in global trade discussions to ensure the acquisition of rice imports and oversees the logistical aspects of rice importation into the country. In contrast, when there is an excess of rice, BULOG supports exports to effectively handle inventory and bolster Indonesia's involvement in international trade. BULOG's efforts are in

accordance with government policies that aim to achieve self-sufficiency in rice production, maintain stable prices, and conduct subsidy programmes to ensure the affordability of rice for consumers while providing support to local farmers. In addition, BULOG oversees the logistical infrastructure required for the storage, transportation, and distribution of rice throughout the varied archipelago, guaranteeing a streamlined and dependable supply chain. Essentially, BULOG plays a crucial role in the import and export of rice, which is vital for achieving the broader objectives of ensuring food security and maintaining economic stability in Indonesia.

Journal Analysis of International Economics Aspects

Ruvananda and Taufiq (2022) examines the determinants of rice imports in Indonesia between 2006 and 2020. The variables under investigation include rice production, rice consumption, exchange rate, and local rice prices. The analysis revealed that all of these variables exert a substantial influence on rice imports. More precisely, rice production has an adverse impact, whereas rice consumption, currency rate, and local rice pricing have a favourable impact on rice imports. The findings indicate that by enhancing rice production and effectively regulating local rice prices, Indonesia can potentially decrease its reliance on rice imports (Ruvananda & Taufiq, 2022). This study also a study revealed a notable and adverse impact of the currency rate on rice imports in Indonesia since 2006 until 2020. Therefore, an increase in the exchange rate results to a decrease in the volume of rice imported into the country. The exchange rate is a crucial factor of the price of imported rice, which is adjusted according to local rice prices. High exchange rates result in elevated prices for imported rice, which then causes a decline in the demand for rice imports. This discovery aligns with previous research investigations by Silban et al (2023) that have similarly identified a detrimental and substantial effect of the exchange rate on rice imports in Indonesia.

Septiadi and Joka (2019) analysed the historical data from the earliest period on 1988 – 2017. The findings indicate that the demand for rice in Indonesia is impacted by various factors, including the retail price of rice, per capita income, population size, rice production, and the previous demand for rice. The examination of the response indicates that the population variable is the sole independent variable that exhibits elastic elasticity ($E > 1$) in both the short and long term. Both the short-term and long-term elasticity of the variables, namely retail rice price, per capita income, and rice output, is inelastic ($E < 1$) (Septiadia & Jokab, 2019).

Politic Economics

Analysis of Politic Economics

Political economy is a multidisciplinary field that combines economics and politics to evaluate the relationship between government and economic systems. This approach examines how political processes, institutions, and structures affect economic policies and outcomes. Political economy studies the involvement of governments in the economy, political ideology's impact on economic decision-making, and political power and economic interests.

The agricultural sector is vital to human life. The agricultural industry is crucial to reaching the second Sustainable Development Goals (SDGs) of zero hunger, food security, nutrition, and sustainable agriculture. Indonesia's agriculture sector is the third largest contributor to GDP and a vital driver of economic growth. Indonesia's agricultural, forestry, and fisheries sector contributed 12.40% to the economy in 2022, according to BPS data.

Despite Indonesia's economic recession during the COVID-19 pandemic, agriculture grew. This sector has grown at 1.77 percent in 2020, 1.87 percent in 2021, and 2.25 percent in 2022. According to the August 2022 National Labor Force Survey, the agriculture sector absorbs 28.61% of all jobs, demonstrating its strategic importance.

Rice harvest area data was collected using standard methods in the Agricultural Statistics (AS) list before Area Frame Sampling (AFS). Subjective metrics including seed use, irrigation water usage (water block), farmer and village official information, and naked eye observation are still used to collect harvest area statistics. Though simple to use, the approach has limitations like low accuracy and long data gathering times.

Since 2018, the Central Statistics Agency (BPS) has worked with the Agency for the Assessment and Application of Technology (BPPT) and the National Institute of Aeronautics and Space (LAPAN), which have merged into the National Research and Innovation Agency (BRIN), the Ministry of Agrarian and Spatial Planning/National Land Agency (Ministry of ATR/BPN), and the National Geospatial Information Agency to improve rice harvest calculation. The obtained data gets more accurate and timelier.

Besides the import-export policy (as explained in international economics), the Indonesian government employs some methods to achieve rice self-sufficiency, or at least to reduce the number of rice import. The Indonesian government allocated a larger portion of the state budget, generated by the reduction of fuel subsidies in 2013-2014, for agricultural infrastructure development starting in 2015. The goal of this programme is to enhance rice production through funding initiatives for the adoption of new and innovative technologies, in details they are (Galuh Octania, 2021).

Journal Analysis of Economics Politics

Nuryantia et al (2017) analysed the implementation of political economics especially the policy by BULOG. BULOG's price instrument policy and import policy has resulted in market failure, as demonstrated by the creation of economic rent and deadweight loss. The participation of BULOG in the rice self-sufficiency plan clearly disrupted the rice market and resulted in a loss of welfare. This finding substantiated the concerns that achieving rice self-sufficiency is economically inefficient due to the production of societal costs. The government should reassess the pricing and import regulations in order to address market inefficiencies. Reducing societal costs resulting from BULOG's price policy and import policy is of utmost importance. It is recommended that the government focus on directing income distribution rather than stabilising prices. Immediate action is necessary to supply and enhance irrigation amenities, agricultural thoroughfares, postharvest technologies, and marketing infrastructure. These operational strategies have the potential to not only mitigate the financial uncertainty faced by producers, but also enhance the buying capacity of consumers. Given that import is one of the sources of economic rent, it is recommended to cease it (Nuryantia , Hakim, & Sire, 2017).

METHODS

This qualitative research method employs a structured literature review methodology focusing on academic journals. The approach involves systematically identifying, evaluating, and synthesizing relevant scholarly articles to comprehensively explore a specific research topic. Initially, stringent criteria are established to select pertinent literature, ensuring credibility and relevance. The process includes database searches, keyword identification, and thematic analysis to extract key insights, trends, and divergent viewpoints from the collected articles. This method enables the creation of a coherent framework that organizes and interprets the findings.

RESULTS AND DISCUSSIONS

Macroeconomic discussion

Indonesia's massive importation of rice generates substantial macroeconomic implications. First, it impacts the country's trade balance by placing pressure on foreign exchange reserves due to the significant amount of rice that needs to be imported. This can result in a deficit of trade, that possibly has a negative effect on Indonesia's overall economic stability. In addition, the dependence on imported rice has an impact on inflation trends, as it has the capacity to either stabilise or worsen prices depending on the effectiveness of distribution systems and the competitiveness of imported rice in comparison to locally grown types. The macroeconomic implications have an impact on the home agricultural industry, which might potentially disrupt farmers' livelihoods and jobs. The increased competition from lower-priced imported rice may pose a threat to the sustainability of local agriculture. In addition, the government should take into account financial provisions for subsidies to ensure the affordability of rice for consumers, which in turn impacts the overall economic well-being. Moreover, the implications of rice imports extend to wider economic and societal aspects. The effect on the distribution of income is

significant, especially in rural regions where agriculture is predominant. Increased competition from inexpensive imported goods may lead to local farmers experiencing heightened competition, resulting in the widening of income disparities and potential impact on the social fabric. The government's capacity to effectively handle the issues of substantial rice imports is closely linked to public view of its management of food security and economic stability, which in turn can impact political and social stability. Furthermore, the macroeconomic impacts also influence the nation's overall growth path, where effective administration has the potential to enhance economic stability, while poor management or unanticipated external circumstances may provide obstacles to growth. Essentially, the macroeconomic ramifications of rice imports for Indonesia include a careful juggling of priorities, necessitating shrewd policy choices to provide food security while safeguarding overall economic stability and social welfare.

Microeconomics discussion

Importing 3 million tonnes of rice into Indonesia would have various implications at the microeconomic level. To begin with, consumers are expected to endure fluctuations in the cost and accessibility of rice. If the imported rice is sold cheaper than domestically produced rice, consumers may purchase the lower price product, which could enhance their purchasing power. They can use the spare money to buy other needs. The shifting consumer behaviour by purchasing the cheaper one, will lead to negative influence of local rice farmers who face difficulties in competing with price, potentially resulting in decrease revenue for local farmers. The magnitude of this influence would be contingent upon the effectiveness of the distribution system and the level of competition of the imported rice in the domestic market. Furthermore, the microeconomic impacts also encompass the employment and income levels specifically within the agricultural sector. Local farmers may encounter a decrease in income and probable employment layoffs due to heightened competition from imported rice. Consequently, this can have a significant impact on the general economic prosperity of rural areas that rely largely on agriculture.

On the other hand, industries that come after in the supply chain, such as transportation and retail, could see benefits because of the rise in economic activity linked to the distribution and sale of the imported rice. The microeconomic implications underscore the necessity of meticulous policy deliberations to strike a balance between the concerns of consumers, local farmers, and the overall economy following the influx of substantial rice imports.

International economic discussion

The import of 3 million tons of rice by Indonesia may have several unfavourable implications for the country's global economic situation. Firstly, it possesses the capability to contribute in the rising of in Indonesia's trade imbalance. The importing in such a large amount of rice requires a significant loss of foreign currency reserves, which might potentially affect the country's total trade surplus. Indonesia's economic stability and management of foreign exchange could face problems, which may result in a greater dependence on external financing. Furthermore, the substantial influx of rice imports could heighten Indonesia's susceptibility to global market volatility and disturbances. Depending exclusively on one commodity, especially a crucial one like rice, makes the country vulnerable to fluctuations in prices and possible disruption in the supply chain. Fluctuations in global rice prices or disruptions in the nations that export rice could have a negative impact on Indonesia's economic situation, causing uncertainty in local markets and affecting the country's capacity to maintain stable and reasonable food prices for its people. The significance of diversity and careful management of international trade partnerships is underlined by these negative consequences, which serve to protect against economic weaknesses.

Politic economic discussion

Evaluating Indonesia's policies and government initiatives to achieve food self-sufficiency requires a comprehensive and subtle analysis. Indonesia has made significant progress in improving agricultural output, executing subsidy programs, and investing in rural infrastructure. These strategies have resulted in a rise in rice production and improved food security for numerous individuals. Nevertheless, there are ongoing difficulties, such as the vulnerability of agriculture to climate change, the requirement for sustained technical progress, and the possible consequences of global market volatility. Especially the El Nino in 2023. According to the statistics from BMKG, the intensity of El Nino is projected to reach its

maximum level in August and September 2023. Simultaneously with the presence of the El Nino phenomena, there are indications of the development of the Indian Ocean Dipole in the Indian Ocean, which is presently moving toward a constructive phase. In 2019, these two natural occurrences resulted to a reduction in rainfall in most regions of Indonesia, resulting in drier than normal conditions. The decrease in rainfall and the rise in aridity significantly affect agricultural practices in Indonesia, particularly rice cultivation. On Augusts 2023, rice cultivation is in the concluding phase of the second season. It is anticipated that the occurrence of El Nino will result in crop failure for farmers in various areas. During the third planting season, farmers typically cultivate tolerant of drought crops like rice paddy because of the water shortages and desert conditions. As the upcoming planting season commences, farmers are compelled to defer rice production due to the lateness of the rainy season, extending beyond the ideal timeframe of October to April 2024. It impacts of the shortage of rice and push the government to import the rice.

Moreover, the effectiveness of specific policies, such as subsidies, can be a topic of debate due to concerns about their long-term sustainability and lasting impact on market dynamics. In order to achieve food self-sufficiency, Indonesia must consistently assess and modify its tactics to navigate the complex and always evolving environment. Furthermore, the efficacy of these programs hinges on addressing socio-economic disparities and ensuring fair allocation of the benefits of improved food production, including for small-scale farmers. In order to prevent potential threats, it is imperative for the government to prioritize the maintenance of a delicate equilibrium between strengthening domestic agriculture and efficiently managing foreign trade partnerships. Periodic assessments of the outcomes and impacts of these policies, along with flexible adjustments to emerging challenges, will be critical factors in determining the overall success of Indonesia's efforts to attain food self-sufficiency

CONCLUSIONS

This part will explain the conclusion and recommendation for stakeholders in every aspect of advanced managerial. Macroeconomics is the study of the overall behaviour and performance of an economy, including factors such as inflation, unemployment, and economic growth. Indonesia could simultaneously consider diversifying its trade portfolio while importing a substantial amount of rice. Decreasing reliance on a solitary commodity can alleviate the effects on the trade balance and foreign exchange reserves. Facilitating the expansion of non-agricultural product or service exports can contribute to achieving macroeconomic equilibrium.

As explained above, microeconomics is the study of individual economic units and their behaviour, such as households, firms, and markets. By creating laws that protect the welfare of local farmers impacted by the rise in rice imports will help the farmers to focus in improving the quality of the farming process were resulting a good output. This could entail the implementation of specific subsidies, agricultural extension initiatives, and technological investments aimed at strengthening the competitiveness of native agriculture. Assisting small-scale farmers will help maintain rural livelihoods and reduce any potential adverse effects on income distribution. In term of consumers, as we know that rice is a staple product where consumers is intent to purchase the most affordable one. By giving the subsidiary for local products and building a great awareness about local pride, it potentially shifts the behaviour and purchasing the local products even the price is higher. Government and stakeholders need to create brand evangelist in local products.

Additionally, there is currently a significant and widespread transfer of land for the purpose of cultivating rice fields. Several former rice fields have been converted into ports, airports, or industrial zones. The expansion of ports, airports, and infrastructure is a major contributing factor to our need for rice imports. Given the existence of supply and demand dynamics, how can we effectively regulate pricing in a scenario where the supply of rice is constrained and we are reliant on imports? To address this issue, we can implement a strategy that involves procuring rice directly from farmers, ensuring that at least fifty percent of the excess supply is purchased. Subsequently, allocate rice fields based on their intended purpose. Alternatively, it is imperative to maintain equilibrium while converting rice fields for industrial or port purposes. Must possess the ability to optimise the yield of rice cultivation in current rice fields.

In addition, we may optimise the use of high-quality seeds to enhance both the yield and quality of rice. Alternatively, we can employ advanced agricultural technologies that enable rice production without the need for extensive land area. We should employ advanced technology, similar to that seen in affluent nations like Singapore, to enhance the cultivation of vegetables and other crops.

In the context of international economics, it is advisable for the Indonesian government to actively pursue diplomatic negotiations in order to secure advantageous conditions for the importation of rice. It is essential to establish robust commercial partnerships, investigate bilateral agreements, and uphold equitable trade practises. Indonesia should concurrently explore the option of diversifying its sources of rice imports in order to decrease its susceptibility to interruptions in particular markets.

Create and enforce comprehensive policies that tackle both immediate food security need and long-term economic sustainability. It could entail implementing a blend of specific financial aid for at-risk demographics, allocating resources towards agricultural research and advancement, and employing strategic decision-making to harmonise the needs of customers, farmers, and the broader economy. Furthermore, as mentioned in micro economics, government need to create a long-term awareness project to create brand evangelist in local rice. even though the import rice product could have cheaper price, the consumers till will purchase the local farmer rice because the local pride and the relevancy of their heart.

REFERENCES

- Badan Pusat Statistik. (2023). *Luas Panen dan Produksi Padi di Indonesia 2023 (Angka Sementara)*. Jakarta: Badan Pusat Statistik.
- BPS, & BRIN. (2023). *Luas Panen dan Produksi Padi di Indonesia 2022: Hasil Kegiatan Pendataan Statistik Pertanian Tanaman Pangan Terintegrasi dengan Metode Kerangka Sampel Area*. Jakarta: Badan Pusat Statistik.
- CNBC Indonesia. (2023, September 29). *Rahasia Akhirnya Terbongkar, Pemicu Tanah Abang Sepi Parah*. Retrieved from CNBC Indonesia: <https://www.cnbcindonesia.com/news/20230929095314-4-476412/rahasia-akhirnya-terbongkar-pemicu-tanah-abang-sepi-parah>
- Galuh Octania. (2021). *Peran Pemerintah dalam Rantai Pasok Beras Indonesia*. Jakarta: CIPS Indonesia.
- Indonesia Investments. (2017, June 28). *Beras*. Retrieved from Indonesia Investments: <https://www.indonesia-investments.com/id/bisnis/komoditas/beras/item183>
- Jehle, G. A., & Reny, P. J. (2011). *Advanced Microeconomic Theory*. Edinburgh: FT Prentice Hall.
- Pudjiastuti, A. Q., Aris, G. M., & Krisnandika, A. A. (2023). *Rice Import Development in Indonesia*. SOCA: Jurnal Sosial Ekonomi Pertanian, 15(2), 390-405.
- Rachmawati, D. (2023, November 6). *Produksi Beras Anjlok, Indonesia Bakal Geber Impor di 2024?*. Retrieved from Ekonomi Bisnis: <https://ekonomi.bisnis.com/read/20231106/12/1711681/produksi-beras-anjlok-indonesia-bakal-geber-impor-di-2024>
- Rizky, M. (2023, November 9). *Makin Parah! RI Siap-Siap Dibombardir 3 Juta Ton Beras Impor*. Retrieved from CNBC Indonesia: <https://www.cnbcindonesia.com/news/20231109112015-4-487634/makin-parah-ri-siap-siap-dibombardir-3-juta-ton-beras-impor>
- Statista. (2023, March 31). *Monthly production of rice paddy in Indonesia from 2020 to April 2023*. Retrieved from Statista: <https://www.statista.com/statistics/1220564/indonesia-monthly-production-of-rice-paddy/>
- Tsai, F. (2019). *An Overview on Macroeconomics: Ideas, Approaches and Importance*. International Journal of Tax Economics and Management, 2(3), 21-31.
- Wahyudi, A. D., Surahman, A., & Anis, N. (2021). *Penerapan Media Promosi Produk E-Marketplace Menggunakan Pendekatan AIDA Model dan 3D Objek*. Jurnal Informatika: Jurnal pengembangan IT (JPIT), 6(1), 35-40.